City of Bloomington
Common Council

Bloomington Peak Oil Task Force

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RESOLUTION 07-16

ESTABLISHING A BLOOMINGTON PEAK OIL TASK FORCE

WHEREAS**,** Petroleum accounts for approximately forty percent of the United States' energy consumption and over ninety percent of its liquid fuel needs for transportation; and,

WHEREAS, Worldwide demand is increasing and is outpacing production; and,

WHEREAS, The global supply of petroleum is finite and is constrained by geological processes which result in a peaking of production at approximately the midpoint of total extraction; and,

WHEREAS, Many industry experts warn that global production of petroleum may be nearing the halfway mark and is at, or near, an all-time global peak; and,

WHEREAS, Global peak will cause the price of oil and natural gas to become more volatile; and,

WHEREAS, Volatile price signals associated with petroleum scarcity may not allow for smooth market adjustments and effective mitigation efforts in the private sector; and,

WHEREAS, Experts advise that efforts to mitigate the impending decline in production must occur 15 to 20 years before petroleum production peaks in order to effectively compensate for increasing scarcity; and,

WHEREAS, The City of Bloomington and its citizens and businesses depend on oil and natural gas for their economic welfare and vital activities including transportation, food, heating and water; and,

WHEREAS, Many Bloomington residents and businesses are not fully aware of the consequences of a decline in oil and natural gas production and would benefit from a complete and objective analysis of local impacts; and

WHEREAS, The Bloomington Common Council passed Resolution 06-07: *Recognizing the Peak of World Petroleum Production* which called for the City and community to prepare for the inevitability of peak oil; and

WHEREAS, The Common Council has passed Resolution 06-05: *Supporting the Kyoto Protocol and the Reduction of Greenhouse Gases* and the Mayor has signed on to the *U.S. Mayors' Climate Protection Agreement*, the success of which both hinge on reducing fossil fuel emissions; and

WHEREAS, The City of Bloomington has a long and demonstrated commitment to sustainability and its three indicators of community well-being: economic vitality, environmental health and social equity;

NOW, THEREFORE, BE IT HEREBY ORDAINED BY THE COMMON COUNCIL OF THE CITY OF BLOOMINGTON, MONROE COUNTY, INDIANA, THAT:

SECTION 1. The Bloomington Peak Oil Task Force shall be established to assess Bloomington's vulnerabilities to a liquid fuels shortage.

(1) Members. The Task Force shall be composed of seven members.

(2) Appointments. Three members shall be appointed by the Mayor and three shall be appointed by the Common Council. One member of the Common Council shall also serve on the Task Force.

(3) Qualifications. Task Force members shall be residents of Monroe County and shall have an understanding of the problem of peak oil. Preference for appointments may be given to government representatives, citizens with expertise in energy, transportation and agriculture, as well as community and business leaders.

SECTION 2. The Task Force's charge shall be:

a. To acquire and study current and credible data and information on the issues of oil and natural gas production and depletion and the related economic and socio-cultural implications;

b. To seek community feedback on vulnerabilities and possible solutions;

c. To coordinate planning efforts with county, State and federal entities;

d. To develop a *Bloomington Peak Oil Task Force Report* for approval by the Mayor and Common Council outlining strategies the City and community might pursue to mitigate the effect of declining fuel supplies in areas including, but not limited to: transportation, municipal services, energy production and consumption, food security, water and wastewater; and

e. To work to educate the community about the impending energy shortage in the interest of encouraging businesses and residents to reduce dependence on fossil fuels.

SECTION 3. Sunset provision. The Task Force shall cease to exist once its final *Bloomington Peak Oil Task Force Report* is approved by both the Mayor and the Common Council. The Task Force shall submit its final *Report* to the Mayor and Council no later than December 31, 2008. However, the Task Force may be renewed or reestablished by resolution.

PASSED AND ADOPTED by the Common Council of the City of Bloomington, Monroe County, Indiana, upon this 5th day of DECEMBER, 2007.

DAVE ROLLO, President
Bloomington Common Council

ATTEST:

REGINA MOORE, Clerk
City of Bloomington

PRESENTED by me to the Mayor of the City of Bloomington, Monroe County, Indiana, upon this 6th day of DECEMBER, 2007.

REGINA MOORE, Clerk
City of Bloomington

SIGNED and APPROVED by me upon this 6th day of DECEMBER, 2007.

MARK KRUZAN, Mayor
City of Bloomington

SYNOPSIS

This resolution recognizes that global petroleum production will soon peak, that such a peak is unprecedented and will reshape many key industries, economies and our current way of life. The resolution calls for the establishment of a *Bloomington Peak Oil Task Force* to assess the community's vulnerability to a liquid fuels shortage and to report its findings to the Mayor and Common Council.

Signed copies to:
legal(10)
webmaster
E.Services
CA/CA(3)
clerk
file

City of Bloomington
Office of the Common Council

To: Members of the Common Council
From: Dave Rollo, Council President and District IV Representative
Re: *Resolution 07-16: Establishing a Bloomington Peak Oil Task Force*
Date: 20 November 2007

As the Common Council has resolved, world petroleum production will soon peak -- a phenomenon known as "peak oil."[1] Reaching peak oil means that world oil production will reach a point of maximum extraction and decline inexorably thereafter. Most estimates place the date of peaking between the present moment and 2020[2] with many experts concluding that we're already at peak production as total liquids have not exceeded 86 million barrels/day since early 2005 despite fierce demand.[3] The implications of peak oil are immediate and systemic as so much of our everyday lives – from transportation to manufacturing to materials to food production -- depend on the availability of cheap oil.

Adjustment to energy scarcity takes years, perhaps decades, to prevent social and economic dislocation. If peak oil arrives soon, with its expected socio-economic disruption, it will be much harder for communities to implement the means to cope with the ensuing depletion. To mitigate the effects of such a shock, a report commissioned by the Department of Energy (DOE), recommends that communities start to adapt to energy shortages 15- 20 years before global production peak.[4] As most estimates place the peak in 2020 at the latest, we must begin mitigation efforts now.

Not only must we begin now, but our efforts must be decidedly local. Despite the DOE report, other reports pointing out that peak is just around the corner,[5] and the valiant efforts by a small caucus in the U.S. Congress, [6] the federal government has done little to prepare for global peak oil. In its report *Crude Oil: Uncertainty about Future Oil Supply Makes it Important to Develop a Strategy for Addressing a peak and Decline in Oil Production*, the U.S. General

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[1] *Resolution 06-07: Recognizing the peak of World Petroleum Production.*
[2] *Crude Oil: Uncertainty about Future Oil Supply Make it Important to Develop a Strategy for Addressing a peak and Decline in Oil Production*, GAO-07-283. February 2007. *See* also: Case Western survey, *Peak-Oil When?* A poll of oil executives which finds most executives expect it "highly likely" that production will decline by 2010. 2007. http://www.peakoilwhen.org/Report_oct07.pdf
[3] Energy Information Agency (EIA) Report, 2007.
[4] Hirsch, R. L., Bezdek, R., Wendling, R. *Peaking of World Oil Production: Impacts, Mitigation & Risk Management. U.S. Department of Energy*. National Energy Technology Laboratory. February 2005
[5] See, e.g., Eileen T. Westervelt, et al., *Energy Trends and Their Implications for U.S. Army Installations*, a report prepared for U.S. Army Corps of Engineers, ERDC/CERL http://www.energybulletin.net/docs/EnergyTrendsUSArmySummary.pdf; Oil Depletion Analysis Center, *New capacity fails to boost 2006 production – delays or depletion?* http://www.odac-info.org/bulletin/documents/MegaProjects_Feb2007.pdf; Fedrik Robelius, *The Highway to Oil – Giant Oil Fields and their Importance for Future Oil Production.* Doctoral Dissertation. Uppsala University, Uppsala, Sweden (2007). http://www.diva-portal.org/diva/getDocument?urn_nbn_se_uu_diva-7625-1__fulltext.pdf
[6] The peak oil Caucus. http://www.sourcewatch.org/index.php?title=Peak_Oil_Caucus

Accounting Office concludes that various government agencies have not even set up a means to communicate and coordinate their efforts in the event of peak oil.[7]

Given this lack of preparation, it is therefore essential that local communities begin the process of adapting to energy depletion. Local governments should lead the way in taking stock of the dependency on fossil fuels, particularly liquid fuels, and in mapping out prudent strategies for energy independence. In fact, local government is uniquely suited to assess such a challenge. Populated with -- or connected to -- local experts, local government is locally accountable and truly has local interests at heart and can respond with the flexibility and motivation larger scales of government cannot.

Several cities have already embarked on local efforts. Kinsale, Ireland, San Francisco, California and Portland, Oregon, have all begun the process of evaluating their dependency, and developing strategies to lessen impacts of oil depletion.[8] Since entering an age of energy scarcity will likely result in economic turmoil, and because of a lag time in implementation of mitigation policies, it is imperative that Bloomington join these communities in making a local effort to plan for our community's health and wellbeing in a post-carbon world. Put simply, preparing for peak oil is just sensible risk management.

Resolution 07-16: Establishing a Bloomington peak oil Task Force responds to the challenge of peak oil by establishing a task force whose charge is to assess our community's vulnerability to the impending energy shortage and to make recommendations to both the City and the community. In outlining the work of the *Task Force*, we've drawn upon the work and experience of communities who have already engaged in such assessments. While many of the problems faced by our community will be similar to those faced by others, we are still unique and much of the *Task Force's* work will be devoted to drafting recommendations specific to our own local economy, demographics, resources and other community characteristics. Notably, both the Bloomington Environmental Commission and the Bloomington Commission on Sustainability have indicated their support of the proposed Task Force.

The *Task Force* will be composed of seven members, drawn from both City and County residents with knowledge of the problem and expertise in key sectors such as economy, agriculture, utilities, energy, public safety and transportation. Three members of the *Task Force* will be appointed by the Mayor and three will be appointed by the Common Council. A member of the Council will also serve on the *Task Force*.

In a time of energy and climate uncertainty, responding to peak oil presents our community with immediate challenges. However, this uncertainty also presents us with a great opportunity to make our already-strong commitment to issues of local self-sufficiency and sustainability even stronger. I respectfully request your support.

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[7] *Crude Oil*, supra
[8] *Post Carbon Cities*, supra.

CITY OF BLOOMINGTON

Prospectus

BLOOMINGTON PEAK OIL TASK FORCE

I. STATEMENT OF THE PROBLEM

The problems associated with world oil production peaking will not be temporary, and past "energy crisis" experience will provide relatively little guidance. The challenge of oil peaking deserves immediate, serious attention, if risks are to be fully understood and mitigation begun on a timely basis.

— *Report sponsored by the U.S. Department of Energy* [1]

Identifying and mitigating community vulnerabilities is probably one of the more important – if often unwritten – expectations we have of our local governments.

--- *Post Carbon Cities: Planning for Energy Uncertainty* [2]

Over the last 150 years, our everyday lives have been radically re-shaped by the availability of inexpensive fossil fuels. Oil fuels our cars, powers our electrical systems, provides the raw material for fertilizer and pesticides used on most of our food crops and is a key component of our ubiquitous plastics industry. Cheap oil and natural gas have clearly allowed us to achieve extraordinary economic and population growth. In fact, the United State consumes twenty-five percent of the world's oil with petroleum alone accounting for over forty percent of the U.S.'s energy consumption and over ninety percent of its liquid fuel needs for transportation.

However, both petroleum and natural gas are finite, non-renewable resources and our consumption of these resources is growing faster than the biosphere can replace them. Indeed, it took nature 100 million years to produce the energy the world uses in one year.[3] Because such consumption has outpaced production, many industry experts – including the United States government – point out that era of cheap oil is about over and that oil production will inevitably

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[1] Hirsch, R. L., Bezdek, R., Wendling, R. *Peaking of World Oil Production: Impacts, Mitigation & Risk Management. U.S. Department of Energy*. National Energy Technology Laboratory. February 2005. p.5 (hereinafter, *The Hirsch Report*).

[2] Lerch, Daniel. *Post Carbon Cities: Planning for Energy and Climate Uncertainty. A Guidebook on Peak Oil and Global Warming for Local Governments*, p.4. Post Carbon Press. 2007.

[3] Eileen T. Westervelt, et al., *Energy Trends and Their Implications for U.S. Army Installations*, a report prepared for U.S. Army Corps of Engineers, ERDC/CERL TN-05-1, September 2005. *See also*, International Energy Agency, World Energy Outlook 2005, p. 125

reach a maximum level and decline thereafter. This point of maximum extraction is commonly known as "peak oil."

Among the forecasts for peak production, most projections locate the peak within the next 14 years, if not sooner. A recent review of 33 peak oil forecasts found that 13 studies estimate peak between 2005 and 2012, 12 place peak between 2012 and 2022 and eight positioned peak between 2025 and never.[4] The early peak projection date is also echoed in a report prepared for the United States Army Corps of Engineers: according to the report, production is approaching its peak and low growth supply can be expected in the next 3-8 years.[5]

If production is widely agreed to peak in the near future, we must begin to think through ways to prepare for a decline in cheap oil. According to a Congressional Report issued by the United States Government Accountability Office (GAO) in early 2007, the peak will present us with unprecedented challenge: "[t]he consequences of a peak and permanent decline in oil production could be even more prolonged and severe than those of past oil supply shocks."[6] To address this challenge, a study sponsored by the U.S. Department of Energy recommends that communities take steps to mitigate the problem early:

> Waiting until world oil production peaks before taking crash program action would leave the world with a significant liquid fuel deficit for more than two decades. Initiating a mitigation crash program 10 years before world oil peaking helps considerably but still leaves a liquid fuels shortfall roughly a decade after the time that oil would have peaked. Initiating a mitigation crash program 20 years before peaking appears to offer the possibility of avoiding a world liquid fuels shortfall for the forecast period.
>
> The obvious conclusion…is that with adequate, timely mitigation, the economic costs to the world can be minimized. …
>
> It is our sincere hope that readers will look beyond the conflicting forecasts and focus on the consequences of underestimating the enormity of the peak oil problem. Effective mitigation means taking decisive action well before the problem is obvious. [7]

In other words, as the peaking of world oil production will cause us to re-think both our individual and community habits, we should start planning soon. Indeed, as pointed out in a recent guidebook for local governments entitled, *Post Carbon Cities*, local governments are uniquely suited to the task of assessing its community's dependency on fossil fuels, particularly

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[4] *Crude Oil: Uncertainty about Future Oil Supply Make it Important to Develop a Strategy for Addressing a Peak and Decline in Oil Production* , GAO-07-283. February 2007. According to senior energy program advisor for Science Applications International Corporation, Robert Hirsch, the date of the peak is uncertain "because much of the data needed for an accurate forecast is either proprietary to companies, state secrets of major oil exporting countries, or politically/economically biased." Hirsch, R.L., *Peaking of World Oil Production: Recent Forecasts*, World Oil 228:4 (2007).

[5] *Energy Trends*, supra .

[6] *Crude Oil*, supra.

[7] *The Hirsch Report*, supra.

liquid fuels, and in mapping out prudent strategies for energy independence.[8] With our community's steadfast commitment to sustainable practices, such as alternative transportation, "buy local" ethic and the reduction of greenhouse gas emissions, we have already started to think through ways to live healthier and more sustainably. However, we can do more. Specifically, we can develop a systematic and comprehensive mitigation plan to address those areas of our everyday life most vulnerable to a decline in cheap fossil fuels: transportation, food, water, heating, and municipal services.

To help the City prepare for a shift in energy reliance, Council President Dave Rollo proposes a *Bloomington Peak Oil Task Force* to explore how the peaking of world oil production might shape the City's ability to maintain City municipal services and how the City of Bloomington might prepare for and build community resilience against energy uncertainty. The City of Bloomington formally recognized that the City must begin preparing for the inevitability of oil peak with the adoption of *Resolution 06-07: Recognizing the Peak of World Petroleum Production*.[9] The establishment of the *Task Force* is the logical and necessary next step. The *Task Force* will join scores of other community groups around the country and world looking for ways to mitigate the effects of dwindling inexpensive fossil fuels.[10]

What follows is a preliminary outline of questions the *Task Force* may ask in the interest of working out solutions to the energy shortage. In devising these questions, the *Task Force* will look to other communities who have pioneered local efforts, such as Portland, Oregon and Tompkins County, NY. Some questions might be construed as outside the purview of City government. However, because the energy shortage will permeate every aspect of our lives and because the City's activities are interdependent with those of the broader community and with other levels of government, it is vital that the City address both its own ability to maintain appropriate levels of service and to ensure that the well-being of its residents is protected.

The concerns documented herein are both for the City's operations and for the health, safety and welfare of all Bloomington residents and businesses. In embarking on this plan for peak oil mitigation, the City is exercising one of its principal roles as a Sustainable City: to foster and unify the three indicia of community well-being -- economic vitality, environmental health and social equity. While, at first blush, planning for the end of cheap oil may seem like a plan that prepares for a bleak future, it actually provides our community with a unique opportunity. Bloomington is a city that strongly values its sense of community and its commitment to sustainability. Preparing for the peak gives us the collective opportunity to make a great community even stronger.

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[8] *Post Carbon Cities*, supra.

[9] *Resolution 06-07: Recognizing the Peak of World Oil Production* can be accessed at: http://bloomington.in.gov/egov/docs/1153747651_559687.pdf

[10] *See*, for example: Portland, OR; San Francisco, CA; Willets, CA, Oakland, CA; San Francisco, CA; Sebastopol, CA; Denver, CO; Boulder, CO: Tompkins County, NY; Franklin, NY; Austin, TX; Plymouth, NH; Lawerence Township, NJ; Leigh Valley, PA; Ohio Peak Oil Action Committee; Addison County Relocalization Network (ACoRN) in Middlebury, VT; Massachusetts Climate Action Network; Harvard Local; Vermont Peak Oil Network; Communities outside of the U.S. have also initiated working groups such as Kinsale, Ireland; Totnes, UK; Working, UK; Hamilton, Ontario and Burnaby, BC. Notably Sweden plans to be the first country in the world to be oil independent by 2020.

II. STATEMENT OF PURPOSE

The goal of the *Bloomington Peak Oil Task Force* is to assess Bloomington's vulnerability to changing energy markets and to develop researched and prudent strategies to protect our community. The ultimate goal of the *Task Force* is to shift our community's infrastructure away from fossil fuel reliance.

III. PRELIMINARY ORGANIZING QUESTIONS

The most important challenges posed by rising oil prices in our community include the interrelated problems of maintaining personal transportation, heating our homes and businesses, producing food while maintaining health, generating safe drinking water and a safe wastewater system and continuing to provide for public safety. The *Task Force* proposes to work toward answering these challenges by exploring strategies to foster local self-sufficiency and fossil fuel independence. The following categories sketch out some of the issues the *Task Force* may explore. It is meant only to be illustrative – once the *Task Force* convenes, it will greatly refine and expand the issues tracked under the following headers.

A. TRANSPORTATION

Perhaps the most marked rupture in our way of life occasioned by peak oil will be transportation. Approximately 95 percent of energy used for transportation is from oil.[11] At the onset of peak oil, gasoline and diesel fuel will continue to be freely available, but very expensive – accessible to only a few. Many community members will likely be required to rely more upon public transit and other mode of non-auto transportation. Representative topics the *Task Force* may address include those that assess:

- the expansion of public transit;
- improving the quality and extent of bicycle and pedestrian networks;
- the need for transportation subsidies;
- changes to the current parking standards;
- further incentives to foster compact urban form;
- use of alternatives to asphalt; and
- other challenges to petroleum-intensive road building and road maintenance.

[11] *Crude Oil*. GAO-07-283

B. FOOD

Approximately 17 percent of all energy used in this country each year goes into growing, processing and delivering food. As the prices of oil and natural gas rise, agricultural productivity will decline and the cost of transporting food will skyrocket. [12] In assessing local vulnerabilities, the *Task Force* will scrutinize local food production, looking at issues such as:

- the percentage of farmland currently in production and that not currently in production;
- the steady-state productive capacity of existing and potential farmland if such land is closed to outside inputs such as cheap fertilizer and fuel;
- the amount of organic fertilizer needed to keep gardens productive;
- encouraging gardening, small-scale agriculture and community-supported agriculture;
- crops needed to sustain local health;
- challenges to self-sufficiency in a mobile, student-heavy community;
- optimal distribution configurations to reduce travel time for both farmer and consumer;
- projected need for apiaries if more fruit trees are planted; and
- preservation techniques are best suited to post-peak oil conditions.

C. WATER

In light of diminishing liquid fuels, the community will need to ensure that its water supply is secure, and water is potable for household use and available for agricultural use.

The City's need to pump much of its water makes its water purification and sewage treatment processes especially vulnerable to a petroleum shortage. Among other questions, the *Task Force* may look at:

- the percentage of the City's water supply dependent on electric pumps;
- the capacity of current water storage tanks;
- alternatives to fossil fuel-dependent inputs for conventional water purification as well as alternatives to fossil fuel-dependent inputs for repair and replacement materials;
- the viability of hydroelectricity generated by the Lake Monroe dam and the feasibility of micro-hydro systems;
- projected need for more irrigation in light of climate change;
- ensuring water safety; and
- larger-scale storage facilities.

Waste Disposal

- age and life of current sewer system;
- alternatives to fossil fuel-dependent inputs for sewage treatment as well as alternatives to fossil fuel-dependent inputs for repair and replacement materials; and
- reducing the amount of energy needed to run the City's sewage and treatment systems.

[12] See Lester Brown, *Plan B 2.0: Rescuing a Planet Under Stress and a Civilization in Trouble* (NY: W.W. Norton & Co., 2006).

D. MUNICIPAL SERVICES

CITY HALL

The City can anticipate increased electricity, natural gas and fuel costs. It might also experience indirect costs including: decreased property tax due to declining real estate values, reduced State and federal funding, decreased reliability of payments to the City by citizens experiencing economic hardship and an increased demand for City services such as police and fire. The City has already taken a number of steps to shift away from reliance on fossil fuels and to foster conservation. In addition to implementing measures to conserve energy in municipal facilities, the City has introduced biodiesel buses, distributed energy-efficient light bulbs, established a City Hall *Team Green*, hosted fora on energy efficiency, encouraged natural landscaping, encourages City employees to walk, bicycle or ride the bus (for free) and will soon partner with Duke Energy in a pilot program to install solar panels on the roof of City Hall. The *Task Force* will look for further ways to reduce City Hall's reliance on fossil fuels by assessing the:

- "emergency-basis-only" electrical consumption of each City department and the adequacy of current back-up capacity;
- feasibility of using alternative energy for back-up generators and the costs and benefits of such a shift;
- most economical street lighting configuration protective of public safety;
- possibility of cooperating with other entities in shifting to renewable non-fossil fuel energy sources;
- feasibility of retrofitting the City with passive energy efficiency measures; and
- use of biofuels as an emergency fuel supply in City vehicles and feasibility of replacing the extant fleet with hybrids.

PUBLIC SAFETY

Emergency service providers such as police and fire will have the highest fuel priority and will be faced with new challenges occasioned by peak oil. The *Task Force* will work the City's Police and Fire Departments to explore:

Police

- whether more officers may be needed if peak oil triggers the predicted period of social and economic dislocation; and
- if the current fleet can be retrofitted for biofuels and/or replaced with hybrids.

Fire.

- the projected increase in cost for operating fire trucks;
- whether securing parts for trucks and other specialized firefighting equipment will become increasingly difficult; and
- whether a petroleum shortage will lead to resident stockpiling and if so, what challenges might this present to fire safety.

E. ENERGY PRODUCTION & CONSUMPTION

HEATING

Reliance on cheap oil and natural gas has allowed many of us to live in poorly-insulated homes with little consequence. As fossil fuels become more expensive, it will be vital that the community work to retrofit homes to become more efficient to prevent hardship. Toward this end, the *Task Force* may look at issues such as:

- incentives for using sustainable energy sources in new buildings, including more locally-produced material;
- the possibility of retrofitting homes for energy efficiency (including, but not limited to passive solar) and subsidies that might be available for those who cannot afford to heat and/or retrofit their homes;
- the feasibility of geothermal heat pumps; and
- encouraging people to live in higher-density configurations.

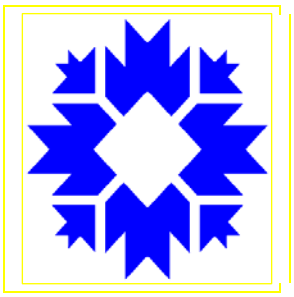
ALTERNATIVE ENERGY

As the *Hirsch Report* and other analyses make clear, alternative sources of electrical energy such as solar panels (photovoltaics), wind power, and hydropower cannot begin to alleviate the near-term transportation crisis, since our petroleum-based equipment will take decades to replace even if it's assumed that we will have the means to do so. But the overall problem will be much worse if we're also lacking affordable electricity. In the interest of fostering use of alternative energy, the *Ta*sk Force may investigate:

- federal, State, and local incentives that might encourage residents install solar power;
- hydropower-generating capacity of the Lake Monroe dam; the cost of such a facility and jurisdictional issues;
- cooperating with I.U. to explore alternatives to fossil fuels; and
- cost/benefit analysis of local alternative energy sources such as: hydroelectricity; solar; geothermal and biogas.

F. HEALTH CARE

If ready access to health care is limited because of both greatly-constrained transportation and high unemployment, how can our community help assure that those who need help receive it? In large part, this topic is beyond the purview of this *Task Force*. However, the Marion County, Indiana Health Department is exploring the implications of peak oil for health care. The *Task Force* may work with, and draw upon the findings of, this group. This category should also address ambulance services. A review of the work of the Marion County Health Department can be found at: http://postcarboncities.net/node/178



Bloomington Peak Oil Task Force

Selected Readings

BOOKS

BROWN, Lester,
Plan B 2.0: Rescuing a Planet Under Stress and a Civilization in Trouble, W.W. Norton & Co. (2006)
Plan B has three components - (1) a restructuring of the global economy so that it can sustain civilization; (2) an all-out effort to eradicate poverty, stabilize population, and restore hope in order to elicit participation of the developing countries; and (3) a systematic effort to restore natural systems.
http://www.earth-policy.org/Books/PB2/index.htm

CAMPBELL, C.J.
The Coming Oil Crisis, Multi-Science Publishing (2004).
An interdisciplinary treatment of how much oil remains to be found and for how long global oil resources can continue to support the expected growth in demand.
Campbell concludes that given current production rates, the mid-point corresponding to peak production, will be reached some time in the first decade of the new millennium. Based on this conclusion, Campbell examines three scenarios and offers some interesting insights into the possible consequences to a world having to adjust to a dwindling oil supply.

DEFFEYES, Kenneth

- ***Hubbert's Peak: The Impending World Oil Shortage*** **(Revised Edition)**.

Princeton University Press (2002)
Deffeyes employs Hubbert's methods to determine that world oil production will peak in this decade.

- ***Beyond Oil: The View from Hubbert's Peak***. Hill and Wang (2005).

Similar to *Hubbert's Peak*, but includes updated information; Deffeyes explains why Hubbert's theory of peak oil obtains and makes a call for public and private entities to develop urgent mitigation plans.

DARLEY, Julian
High Noon for Natural Gas: The New Energy Crisis, Chelsea Green Publishing (2004)
http://www.highnoon.ws/
Darley examines the dependence on natural gas and why such dependence has the potential to cause serious environmental, political, and economic consequences. Darley offers critical analyses of government policy a well-researched picture of the looming energy crisis.

EBERHART, MARK
Feeding the Fire: The Lost History and Uncertain Future of Mankind's Energy Addiction. Harmony (2007).
Eberhart documents the history of energy and the evolution of energy-dependence. The author examines the consequences of energy dependence and clearly demonstrates the immanence of the crisis that looms if we continue current consumption patterns.

GOODSTEIN, David
Out of Gas: The End of the Age of Oil. W.W. Norton (2005).
Goodstein outlines the scientific principles of the inevitable fossil fuel shortage and points to the promise afforded by switching to other sources of energy.

HEINBERG, Richard

- ***The Party's Over: Oil, War, and the Fate of Industrial Societies***
  New Society Publishers (2003)
  Heinberg, an award-winning author and member of the Core Faculty at Santa Rosa's New College, shows how modern industrial society is completely dependent on fossil fuels and hence vulnerable to reductions in energy availability. He argues that peak oil is imminent, and that oil plays a major role in geopolitics.

- ***Powerdown: Options and Actions for a Post-Carbon World***
  New Society Publishers (2004)
  In this sequel to *The Party is Over*, Heinberg provides an update, reviewing further the four primary ways that our culture can approach these energy supply issues. He determines that the prudent way to handle the energy shortage is by "powering down" through intelligent, informed, cooperative means while simultaneously working to build community solidarity, preserve knowledge, artifacts and tools.

- ***The Oil Depletion Protocol*** (with Colin Campbell)
  New Society Publishers (2006)
  Heinberg maps out an agreement whereby nations would voluntarily reduce their oil production and oil imports. The book provides a review of the history and literature of peak oil, explains the protocol and its implications for government and industry; explains how municipalities and citizens can facilitate the process. A protocol for reducing oil dependence by 25% over the next ten years.

KUNSTLER, James Howard
The Long Emergency: Surviving the End of the Oil Age, Climate Change, and Other Converging Catastrophes. Atlantic Monthly Press (2005)
Kunsler discuss peak oil in the context of climate change, infrastructure challenges and habitat destruction. The author describes the political, social and economic consequences of peak oil and argues that our way of life will have to become intensely more local, that the economy will have to be structured around food production and that land will have to be reallocated.

LOVINS, Armory, et al.
Winning the Oil Endgame: Innovation for Profit, Jobs and Security. Rocky Mountain Institute (2005)
Co-funded by the Pentagon, this study provides a plan for reducing U.S. oil use by 50% by 2025 and ending foreign oil dependency. Lovins outlines 4 shifts required to end foreign oil dependency: 1) doubling the efficiency of using oil, through measures such as ultralight vehicle design, 2) applying creative business models and public policies to speed the profitable adoption of superefficient light vehicles, heavy trucks and airplanes, 3) embarking on the crash development of biofuels, cellulosic ethanol in particular, and 4) applying efficiency measures to save 50% of the projected 2025 use of natural gas.

MOBBS, Paul
***Energy Beyond Oil*.** Matador Press (2005)
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http://www.guardian.co.uk/life/feature/story/0,13026,1464050,00.html

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http://www.worldwatch.org/epublish/1/v19n1

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Crude Oil: Uncertainty about Future Oil Supply Make it Important to Develop a Strategy for Addressing a Peak and Decline in Oil Production , GAO-07-283. February 2007. http://www.gao.gov/new.items/d07283.pdf

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GUIDEBOOKS

THE POSTCARBON INSTITUTE
http://postcarboncities.net/

- Lerch, Daniel, *Post Carbon Cities: Preparing local governments for energy and climate uncertainty*. (*forthcoming*)
  "Describes the challenges that peak oil and climate change pose to local governments of all sizes, and outlines what local leaders can do in response"
  Executive summary: http://postcarboncities.net/guidebook
- *Preparing for Peak Oil at City Hall*
  http://postcarboncities.net/node/264

THE OIL DEPLETION ANALYSIS CENTRE
Preparing for Peak Oil (aimed specifically at local government in the UK)
http://www.odac-info.org//welcome/documents/PFPO_Final.pdf

COMMUNITY-BASED PEAK OIL EFFORTS

- **Marion County Health Department (Indiana)**
  http://postcarboncities.net/node/178

- **Portland, Oregon**
  Portland Peak Oil Task Force
  http://www.portlandonline.com/osd/index.cfm?c=ecije

- **Tompkins County, NY**
  TC Local
  http://www.tclocal.org

- **Franklin, NY**
  http://www.postcarbon.org/involve/resolution/franklin

- **Sebastopol, CA**
  Citizens Advisory Group on Energy Vulnerability
  http://www.ci.sebastopol.ca.us/pdfs/programs/CAGEReport04-03-07.pdf
  Interview with Sebastopol Mayor:
  http://globalpublicmedia.com/transcripts/481

- **San Francisco, CA**
  Municipal Response Presentation:
  http://www.sfgov.org/site/uploadedfiles/lafco/PeakOilHearing20060728.ppt
  Resolution:
  http://www.sfgov.org/site/uploadedfiles/bdsupvrs/resolutions06/r0224-06.pdf
  Peak Oil Awareness Group: http://www.sfbayoil.org/

- **Willits, CA**
  Willits Economic Localization
  http://www.willitseconomiclocalization.org/
  Strategic plan:
  http://www.willitseconomiclocalization.org/files/well/WELLStratPlanDocJuly2006.pdf

- **Austin, TX**
  Energy Depletion Risks Task Force
  http://www.ci.austin.tx.us/council_meetings/wams_item_attach.cfm?recordID=5309
  http://postcarboncities.net/node/233

- **Denver, CO**
  Mayor hosted World Oil Forum 10-11 November 2005 and the City conducted an internal study of material dependencies on oil.
  Interview with Denver Mayor: http://postcarboncities.net/node/67

- **Boulder, CO**
  Boulder Relocalization
  http://www.boulderrelocalization.org/

- **Lawrence Township, NJ**
  Sustainable Lawrence
  http://sustainablelawrence.org/

- **Seattle, WA**
  Seattle Peak Oil Awareness
  http://www.seattleoil.com/

- **Ballard, WA**
  Sustainable Ballard
  http://sustainableballard.org/wiki/index.php?title=Welcome_to_Sustainable_Ballard!

- **Bellingham, WA**
  Sustainable Bellingham
  http://www.relocalize.net/groups/bellingham

- **Port Townsend, WA**
  Local 2020 Port Townsend Economic Localization
  http://www.thegreatturning.net/PortTown.php

- **Houston, TX**
  Houston Peak Oil
  http://houstonpeakoil.org/
  Houston Power to People – a City of Houston-led conservation effort
  http://www.houstonpowertopeople.com/

- **Leigh Valley, PA**
  The Alliance for Sustainable Communities, Lehigh Valley
  www.sustainlv.org

- **Nevada County, CA**
  Alliance for a Post-Petroleum Local Economy (APPLE)
  http://www.apple-nc.org/index.html

- **Oakland, CA**
  The Oakland City Council has committed to be oil independent by 2020.
  http://www.oaklandnet.com/Oil/Pdfs/OilTaskForcePowerPointPresentationcopy.pdf
  Resolution:
  http://energypreparedness.net/files/oaklandOilIndependenceResolution.pdf?PHPSESSID=7f7c1ea340ffbe7616047f2dae4bae51

- **Middlebury, VT**
  Addison County Relocalization Network (ACoRN) in Middlebury, VT
  http://www.acornvt.org/index.html

- **Santa Cruz, CA**
  Santa Cruz Post Carbon
  http://www.relocalize.net/groups/santacruz

- **Ohio Peak Oil Action Committee**
  http://www.ohiopeakoilaction.org/resources.html

- **Massachusetts Climate Action Network**
  http://www.massclimateaction.org/communitycontactlist.htm

- **Vermont Peak Oil Network**
  http://www.vtpeakoil.net/

- **Harvard Local**
  http://www.harvardlocal.org/index.shtml

- **Kinsale, Ireland**
  Kinsale 2021: An Energy Descent Action Plan
  www.FuellingTheFuture.org

- **Totnes, UK**
  Transition Town Totnes
  http://www.transitiontowns.org/Totnes/

- **Burnaby, BC**
  http://postcarboncities.net/node/164

- **Sweden's Commission on Oil Independence**
  Swedish Commission on Oil Independence has proposed a number of far-reaching, concrete measures intended to end Sweden's dependence on oil by the year 2020.
  http://www.social.ministry.se/content/1/c6/06/70/96/7f04f437.pdf

PEAK OIL SITES

ASSOCIATION FOR THE STUDY OF PEAK OIL – USA
http://www.aspo-usa.com/

- **2007 HOUSTON WORLD OIL CONFERENCE**
  http://www.aspo-usa.com/aspousa3/

ASSOCIATION FOR THE STUDY OF PEAK OIL – INTERNATIONAL
http://www.peakoil.net/
ASPO International is a network of scientists, affiliated with European institutions and universities, having an interest in determining the date and impact of the peak and decline of the world's production of oil and gas, due to resource constraints." It was founded in 2000 by Colin Campbell and Jean Laherrére, a French petroleum geologist.

BLOOMINGPEAK
http://www.bloomingpeak.org/
A local forum devoted to bringing the topic of peak oil into public discussion.

DRY DIPSTICK
www.drydipstick.com
A peak oil metadirectory.

THE ENERGY BULLETIN
http://www.energybulletin.net/
Clearinghouse for current information regarding the peak in global energy supply.

ENERGY INFORMATION ADMINISTRATION,
UNITED STATES DEPARTMENT OF ENERGY
www.eia.doe.gov
Official Energy Statistics from the U.S. government

- *See esp. the Administration's report on The Short-term Energy Outlook.*
  http://www.eia.doe.gov/emeu/steo/pub/contents.html

GLOBAL PUBLIC MEDIA
http://www.globalpublicmedia.org/
Public service broadcast site sponsored by the Post Carbon Institute.

HUBBERT PEAK OF OIL PRODUCTION
http://www.hubbertpeak.com/
Named after the late Geophysicist, Dr. M. King Hubbert, this website provides data, analysis and recommendations regarding the upcoming peak in the rate of global oil extraction.

INTERNATIONAL ENERGY AGENCY (IEA)
www.iea.org
The IEA is an intergovernmental organization, founded by the Organisation for Economic Co-operation and Development (OECD), which "acts as energy policy advisor to 26 member countries in their effort to ensure reliable, affordable and clean energy for their citizens. It is "dedicated to preventing disruptions in the supply of oil, as well as acting as an information source on statistics about the international oil market and other energy sectors and promoting and developing alternate energy sources, rational energy policies, and multinational energy technology co-operation."

THE OIL DEPLETION ANALYSIS CENTRE
http://www.odac-info.org/
An indep*endent, UK educational charity working to raise international public awareness of the world's oil-depletion problem. ODAC believes that lead time is running short for a smooth transition to new energy systems and a less oil-dependent way of life.*

THE OIL DRUM
www.theoildrum.com
Features discussions of ideas related to peak oil, sustainable development and the implications of these ideas on politics and economics.

PEAK OIL
www.Peakoil.com
Large online community featuring news stories and message boards.

PEAK OIL CHAT
http://www.peakoilchat.com/
A real time, instant message style discussion on peak oil, economics, alternative energy sources, self sufficiency and sustainability.

PEAK OIL NEWS
www.peak-oil-news.info
Daily updates on peak oil developments.

THE POST CARBON INSTITUTE
http://www.postcarbon.org/
The Post Carbon Institute assists communities in the effort to relocalize and adapt to an energy constrained world.

RE-LOCALIZATION SITES

BUSINESS ALLIANCE FOR LOCALIZING ECONOMIES (BALLE)
http://www.livingeconomies.org
BALLE is an alliance of businesspeople around the U.S. and Canada who share the goal of building local living economies. In California, there are local BALLE networks in Berkeley, Napa Valley, Oakland, San Benito County, San Francisco, Santa Cruz County, Sierra Nevada, Sonoma County, and Willits.

RELOCALIZATION NETWORK
http://www.relocalize.net/
"*The Relocalization Network supports Local Post Carbon Groups as they work to develop and implement the strategy of relocalizatiion in their communities. The Relocalization Network Coordinators support the Network by providing on-line communication tools, developing valuable resources, facilitating meaningful and useful connections between Local Groups and cultivating a sense of working together globally on local responses."*

THE COMMUNITY SOLUTION
http://www.communitysolution.org/
Devoted to low-energy solutions for self-reliant communities.

NEW COLLEGE OF CALIFORNIA, POWERDOWN PROJECT
http://www.powerdownproject.org/
Based out of the New College of California, the mission of the Powerdown Project is to bring the urgent issues of energy vulnerabilities to communities and their policy makers, through education, outreach and research, and to offer alternative and viable solutions to address energy consumption, production and distribution.

INTERNATIONAL COUNCIL FOR LOCAL ENVIRONMENTAL INITIATIVES (ICLEI)
www.iclei.org
ICLEI is an international association of local governments, and national and regional local government organizations, that have committed to sustainable development. Through Local Renewables (LR), ICLEI aims "to support and strengthen local governments which promote the generation and supply of renewable energy sources and energy efficiency in the urban environment." Through the Cities for Climate Protection (CCP), cities are enlisted "to adopt policies and implement measures to achieve quantifiable reductions in local greenhouse gas emissions, improve air quality, and enhance urban livability and sustainability."